

IN THE SPECIFICATION

(1) Please add the sequence listing after the abstract and before the drawings.

(2) Delete the paragraph on page 5 beginning on line 7 and replace with the following paragraph:

FIG 1. Diagram of the nucleotide and amino acid sequence in the modified regions of viral genome of the viral vectors derived from a Taiwan strain (TW-TN3) of *Zucchini yellow mosaic virus* (ZYMV). Schematic representation of relevant portions of the genomic region of ZYMV non-coding regions (thick black lines), coding regions (open box), and the inserted foreign gene (black lines) are shown. Protease cleavage sites processed by the NIa protease of ZYMV are shown by “/”. The p35SZYMV2-26 that contained the full-length cDNA to the genomic ss(+)RNA of TW-TN3, driven by a *Cauliflower mosaic virus* (CaMV) 35S promoter to generate *in vivo* infectious transcript, was used for vector construction. An *Nco* I site was created between the N-terminal 2nd and 3rd aa of the HC-Pro coding sequence for insertion of foreign gene (SEQ ID NOS:5 and 6). In p35SZYMVGFPhis, the GFP coding sequence was inserted into the *Nco* I site and the NIa-protease cleavage site (S-V-R-L-Q/S) (SEQ ID NO:1) was inserted at the C-terminal end of the GFP to produce the free form GFP. In addition, several restriction enzyme sites and six histidines (His-tag) were engineered between the GFP and the NIa-protease cleavage site. In p35SZYMVDerp5, the coding sequence for the house dust mite allergen of *Dermatophagoides pteronyssinus* 5 (Der p 5) protein was inserted into the viral vector. The corresponding recombinant viruses generated by each construct are shown in parenthesis.

(3) Delete the paragraph that spans pages 9 and 10 and replace with the following paragraph:

In another embodiment of the invention, the vector for plant transformation is a modified plant virus. Potyviruses are usually utilized for the purpose, and preferably, zucchini yellow mosaic virus (ZYMV) and tobacco mosaic virus (TMV) are suitable according to the invention. In order to transform plants, the allergen gene must be inserted into the genome of the plant. Furthermore, the allergen gene must contain all the genetic control sequences necessary for the

expression of the gene after it has been incorporated into the plant genome. Accordingly, a vector must be constructed to provide the regulatory sequences such that they will be functional upon inserting a desired gene. In one embodiment of the invention, the regulatory sequences comprise an operably linked plant expressible promoter, a translation initiation codon (ATG) and a plant functional poly(A) addition signal (AATAAA) (SEQ ID NO:2) 3' of its translation termination codon. Additionally, in order to obtain a higher level of expression, untranslated regions 5' and 3' to the inserted genes are provided. When the expression vector/insert construct is assembled, it is used to transform plant cells which are parts of a mature plant or have an ability to regenerate a new plant. These transgenic plants carry the viral gene in the expression vector/insert construct. Once the virus replicates, propagates and spreads, the allergens are produced in the plant.

(4) Delete the paragraph that spans pages 14 and 15 and replace with the following paragraph:

Generation of ZYMV-Der p 5 recombinant plant virus: The development of ZYMV vector was based on the previously constructed infectious clone, p35SZYMV2-26 (Lin SS, Hou RF, Yeh SD. Construction of in vitro and in vivo infectious transcripts of a Taiwan strain of *Zucchini yellow mosaic virus*. Bot Bull Acad Sin 2002;43:261-269), which is driven by a *Cauliflower mosaic virus* (CaMV) 35S promoter to generate in vivo infectious transcript, to insert the ORF of GFP (Clontech) between the P1 and HC-Pro coding regions of ZYMV. The multiple cloning sites (*Nco* I, *Sph* I, *Apa* I, *Mlu* I, *Kpn* I, and *Sac* II) were created flanking the N- and C- terminis of GFP coding region by polymerase chain reaction (PCR) with designed primers. A hexahistidine (histidine-tag) and NIa protease motif of TW-TN3 (S-V-R-L-Q/S) (SEQ ID NO:1) were also created by PCR on the C-terminal end of GFP ORF. The new viral vector, harboring the report gene GFP, multiple cloning sites, a histidine-tag, and a NIa protease cleavage motif, was designated as p35ZYMVGFP (FIG. 1).